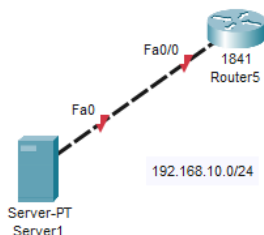


组网及说明



组网说明:

本案例采用思科模拟器的路由器模拟IOS镜像恢复的典型案列。

在日常工作中，会偶尔遇到用户误删网络设备镜像导致设备成砖的情况，当设备成砖后，还可以通过一些特定的方式来恢复IOS镜像。

配置过程:

- 1、复现误删IOS镜像的操作。
- 2、使用TFTP的方式将IOS镜像导入到路由器。

配置步骤

操作过程:

- (1) 复现误删IOS镜像的操作。

特别说明：删除前，先使用dir命令记录IOS镜像的名称。

c1841-advipservicesk9-mz.124-15.T1.bin

```
Router#dir
Directory of flash:/
 3  -rw-   33591768      <no date>  c1841-advipservicesk9-mz.124-15.T1.bin
 2  -rw-    28282      <no date>  sigdef-category.xml
 1  -rw-    227537      <no date>  sigdef-default.xml

64016384 bytes total (30168797 bytes free)
Router#
```

记录完成后，使用delete删除IOS镜像文件。

```
Router#delete c1841-advipservicesk9-mz.124-15.T1.bin
Delete filename [c1841-advipservicesk9-mz.124-15.T1.bin]?
Delete flash:/c1841-advipservicesk9-mz.124-15.T1.bin? [confirm]
Router#
```

删除完成后，使用reload命令重启

```
Router#reload
Proceed with reload? [confirm]
System Bootstrap, Version 12.3(8r)T8, RELEASE SOFTWARE (fc1)
Initializing memory for ECC
..
C1841 processor with 524288 Kbytes of main memory
Main memory is configured to 64 bit mode with ECC enabled

Readonly ROMMON initialized

Boot process failed...

The system is unable to boot automatically. The BOOT
environment variable needs to be set to a bootable
image.
rommon 1 >
```

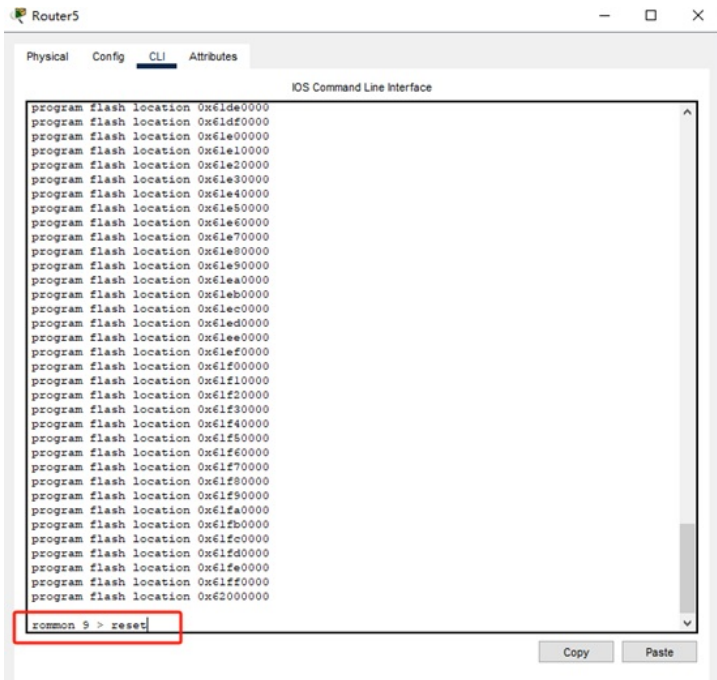
配置关键点

重启后发现无法正常启动进入IOS系统，说明已经刷成砖。

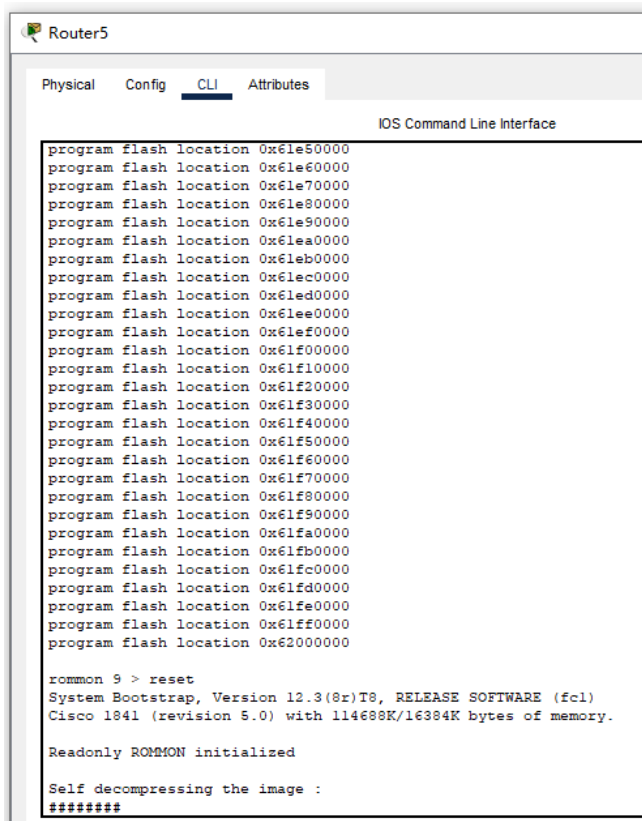
使用如下操作恢复路由器的IOS镜像。

- ```
rommon 1 > IP_ADDRESS=192.168.10.1 //设置路由器的IP地址
rommon 2 > IP_SUBNET_MASK=255.255.255.0 //设置子网掩码
rommon 3 > DEFAULT_GATEWAY=192.168.10.2 //设置默认网关
rommon 4 > TFTP_SERVER=192.168.10.2 //指向TFTP服务器
rommon 5 > TFTP_FILE=c1841-advipservicesk9-mz.124-15.T1.bin //指定要下载的文件
rommon 6 > set //查看配置的情况
DEFAULT_GATEWAY=192.168.10.2
```





正在启动



启动完成，可以进入系统。

```
Physical Config CLI Attributes
IOS Command Line Interface
Copyright (c) 1996-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team
Image text-base: 0x60080608, data-base: 0x6270CD50

This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wml/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947218E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(15)T1,
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1996-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: |
```

至此，思科路由器IOS镜像恢复的典型案例已完成。